INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/015733

| A. | CLASSIFICATION OF SUBJECT MATTER | | | | | | | |
|----|----------------------------------|------------|-------|--------|-------|------------|------------|-------|
| | $Int.Cl^7$ | C12N15/56, | 9/24, | 1/15, | 1/19, | D06M16/00, | C11D3/386, | 7/42, |
| | | D21H11/20, | 25/18 | , A23K | 1/12 | | | |

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ C12N15/56, 9/24, 1/15, 1/19, D06M16/00, C11D3/386, 7/42,
D21H11/20, 25/18, A23K1/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

GenBank/EMBL/DDBJ/GeneSeq, SwissProt/PIR/GeneSeq, BIOSIS/WPI(DIALOG),

JSTPlus(JICST)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| X/A | JP 11-502701 A (Novo Nordisk A/S), 09 March, 1999 (09.03.99), Particularly, Claims 72, 82 to 104; sequence Nos. 8, 9 & WO 96/29397 A1 & EP 815209 A & US 6001639 A & US 6387690 B1 & US 2003/0054539 A1 | 6-25/1-5 |
| X/A | WO 00/24879 Al (Meiji Seika Kaisha, Ltd.), 04 May, 2000 (04.05.00), Particularly, Claims 1 to 85 & EP 1123974 Al | 6-28/1-5 |
| X/A | WO 01/90375 Al (Meiji Seika Kaisha, Ltd.), 29 November, 2001 (29.11.01), Particularly, Claims 1 to 29 & EP 1291431 Al | 6-28/1-5 |

| Further documents are listed in the continuation of Box C. | See patent family annex. | | |
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| * Special categories of cited documents: "A" document defining the general state of the art which is not considered | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand | | |
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| "P" document published prior to the international filing date but later than the priority date claimed | "&" document member of the same patent family | | |
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| Date of the actual completion of the international search | Date of mailing of the international search report | | |
| 18 November, 2004 (18.11.04) | 14 December, 2004 (14.12.04) | | |
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| Form PCT/ISA/210 (second sheet) (January 2004) | | | |